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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,240	10/08/2003	John W. Horrigan	10559-018002	9992

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EXAMINER	
TRAN, DENISE	

ART UNIT	PAPER NUMBER
2185	

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/682,240	HORRIGAN ET AL.	
	Examiner	Art Unit	
	Denise Tran	2185	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8,9 and 31-52* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8,9,31-37,39,41-49 and 51* is/are rejected.

7)☒ Claim(s) *38,40,50 and 52* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The applicant's amendment filed 10/27/05 has been considered. Claims 1-7 and 10-30 have been canceled. Claims 8-9 and new added claims 31-52 are presented for examination.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 8-9, 31-32, 34-36, 39, 41-44, 46-48, and 51 are rejected under 35 U.S.C. 102(e) as being anticipated by Tischler, U.S. Patent No. 6,483,516.

As per claim 8, Tischler teaches the use of a method of transitioning a processor from one operating mode to a second operating mode comprising:

Flushing a first portion of a cache in a first stage and flushing a second portion of the cache in a second stage (i.e., invalidating or evicting unlocked regions, e.g., col. 3, lines 15-20; col. 8, lines 15-20), wherein the processor is available between the first stage and the second stage (e.g., col. 8, lines 15-25);

Disabling the first portion (e.g. lock down region, col. 3, lines 15-20 or disabling access to some regions col. 8, lines 20-25)

Transitioning the processor from the one operating mode to the second operating mode (e.g. col. 4, lines 50-55; col. 8, lines 15-20); and

Enabling the disabling portions of the cache (e.g., col. 8, lines 30-55; col. 8, lines 5-15).

Claim 41, Tischler teaches an article comprising a machine-readable medium storing instructions for transitioning a processor from one operating mode to a second operating mode (e.g., col. 8, lines 5-10; 40-45), the instructions operable to cause operations comprising:

Flushing a first portion of a cache in a first stage and flushing a second portion of the cache in a second stage (i.e., invalidating or evicting unlocked regions, e.g., col. 3, lines 15-20; col. 8, lines 15-20), wherein the processor is available between the first stage and the second stage (e.g., col. 8, lines 15-25);

Disabling the first portion (e.g. lock down region, col. 3, lines 15-20 or limiting eviction to some regions col. 8, lines 20-25);

Transitioning the processor from the one operating mode to the second operating mode (e.g. col. 4, lines 50-55; col. 8, lines 15-20); and

Enabling the disabling portions of the cache (e.g., col. 8, lines 30-55; col. 8, lines 5-15).

As per claims 9 and 42, Tischler teaches wherein transitioning the processor from one operating mode to the second operating mode comprises transitioning the

processor from one processor mode within the G0 working state to a second processor mode within the G0 working state (e.g. col. 4, lines 50-55; col. 8, lines 15-20).

Claims 31and 43, Tischler teaches functionally dividing the cache into the first portion and the second portion prior to flushing the first portion (e.g. lock down region, col. 3, lines 15-20 or limiting eviction to some regions col. 8, lines 20-25).

Claims 32 and 44, Tischler teaches wherein disabling the first portion comprises disabling the first portion once the flushing of the first portion is complete (e.g. invalidating or evicting unlocked region, col. 3, lines 15-20; col. 8, lines 15-20 and invalidating or evicting a region and disabling invalidating or evicting to the region or limiting eviction to some regions col. 8, lines 20-60).

Claims 34-36, 39, 46-48, and 51, Tischler teaches accessing a memory location when the processor is available (e.g., col. 7, lines 5-15); flushing a third portion of the cache in a third stage: wherein the processor is available between the second stage and the

third stage (e.g., invalidating or evicting unlocked regions, col. 3, lines 15-20; col. 8, lines 15-25); the first portion of the cache is larger than the second portion of the cache (e.g., col. 8, lines 15-25); and flushing the first portion of the cache comprises flushing the first portion of a L1 primary cache (e.g., col. 6, lines 25-35; 40-60).

4. Claims 33, 37, 45, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tischler, U.S. Patent No. 6,483,516 as applied to claims 8 and 41 above, and further in view of Cooper, US 6442700.

Claims 33, 37, 45, and 49, Tischler does not teaches servicing an interrupt when the processor is available and enabling interrupts after transitioning from the one operating mode to the second operating mode. Cooper teaches servicing an interrupt when the processor is available (e.g., col. 11, lines 60-65) and enabling interrupts after transitioning from the one operating mode to the second operating mode (e.g., col. 12, lines 65-68). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Cooper into the system of Tischler because it would allow increasing system performance while ensuring properly manage transitioning.

5. Claims 38, 40, 50, and 52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Applicant's arguments with respect to claims 8-9 have been considered but are moot in view of the new ground(s) of rejection.

7. The following prior art not relied upon are considered pertinent to Applicant's disclosure:

a) Tischler et al. US 6591347 shows flushing portion of cache and transitioning processor from one mode to anther mode.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise Tran whose telephone number is (571) 272-4189. The examiner can normally be reached on Monday, Thursday, and Friday from 9:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim, can be reached on 571-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Denise Tran

1/6/06